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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,796	05/11/2006	Kyung Tae Park	2017-086	6851
53706 IPLA P.A. 3550 WILSHIRE BLVD. 17TH FLOOR LOS ANGELES, CA 90010	7590 01/25/2010		EXAMINER BALDWIN, GORDON	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 01/25/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/595,796

Applicant(s)

PARK, KYUNG TAE

Examiner

GORDON R. BALDWIN

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2009.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 11 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date 20060511
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 1-4 in the reply filed on 10/29/2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the applicant's description of the configuration of the layers in claim 1 is considered to be vague because initially, the glass bead layer is formed below or under the colored transparent layer. While later in claim 1, it seems to be indicated that actually the glass bead later is embedded in the colored transparent paint film layer. In other words, are the beads considered to be below or fixed in the colored transparent film layer (40). The claim language seems to be ambivalent.

Regarding claim 2, there is discernable physical distinction between the round and the shaft beads. They have very similar sizes and the figures do not show any real distinction in their shape especially (other than being slightly smaller) in light of the specification. Therefore, the difference between the beads is not clear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akira (JPO Publication 06-075303) and further in view of Yutaka (JPO Pub. 55-161613). The Japanese references were provided by the applicant; however, the full translations were gathered from the JPO on-line machine translations (<http://www19.ipdl.inpit.go.jp/PA1/cgi-bin/PA1INDEX>).

Considering claims 1 and 3, Akira discloses in figure 1 and paragraphs 11-16 a reflective article where layer 1 is an embossed coating layer and layer 2 is a polarized filter layer, which is considered to be a colored transparent paint film layer (like applicant's #40) because it is colored with an iodine solution, which polarizes the layer for light transmission. Then Akira also discloses that the glass bead layer (3) is placed under the polarized filter layer (2) (colored transparent layer) with a layer of transparent

colorless resin material being (6) being under the glass beads (5) of uniform size and then a light reflection layer (4) which is made of aluminum foil or plate and gives a pearl or silver pigment. (Figure 1 and paragraphs 11-16)

Akira does not disclose that it is known to make a reflective sheet where it is known to embed the glass beads partially in the colored transparent layer. However Yutaka discloses that it is known to embed a glass bead (3) about half way into a colored transparent layer (2) in addition to embedding the other half of the glass bead (3) into a focus adjusting resin layer (which is considered to be transparent). (Akira, Constitution)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the reflective article of Akira with the embedded glass beads in the reflective article of Yutaka to obtain a recurrent reflective sheet at a lower manufacturing cost. (Akira, Abstract)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akira (JPO Publication 06-075303) , Yutaka (JPO Pub. 55-161613) and further in view of Booras (U.S. Pat. No. 3,877,786). The Japanese references were provided by the applicant; however, the full translations were gathered from the JPO on-line machine translations (<http://www19.ipdl.inpit.go.jp/PA1/cgi-bin/PA1INDEX>).

Considering claim 4, the combination of Akira and Yutaka disclose the claimed invention except they do not teach the use of polyurethane for the variety of layers used to make the reflective sheet.

However, Booras discloses a multicolored reflective article with a colored layer (10) that can be embossed (fig. 5) with a colorless resin (20) over a layer of glass beads (16) with a transparent space layer (14) and a silver reflective layer (12). (Col. 3 lines 55-68 and Col. 4 lines 1-5) Additionally, Booras discloses that the resin components of the overlays can include polyurethane resins. (Col. 8 lines 17-35)

This disclosure by Booras is considered to make the use of polyurethanes in reflective layered materials obvious to a person of ordinary skill in the art at the time of the invention since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. (MPEP 2144.07)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GORDON R. BALDWIN whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gordon R Baldwin/
Examiner, Art Unit 1794